

Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.

ATD 224
I2I33

Sta

Water Supply Outlook For Idaho



USDA
CRIC LIBRARY
RECEIVED
MAY 10 1983
SERIALS
DETAILS BRANCH



**SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE**

Cooperating with

IDAHO SOIL CONSERVATION DISTRICTS
IDAHO DEPARTMENT OF WATER RESOURCES
NOAA, NATIONAL WEATHER SERVICE

AS OF
May 1, 1983

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: Fresh powder snow on Elephant Mountain, near the West Fork of Hyalite Creek in Montana.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.



WATER SUPPLY OUTLOOK FOR IDAHO

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

PETER C. MEYERS
CHIEF
SOIL CONSERVATION SERVICE
WASHINGTON, D C

////////////////////////////////////
Released by

AMOS I. GARRISON, JR.
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
BOISE, IDAHO

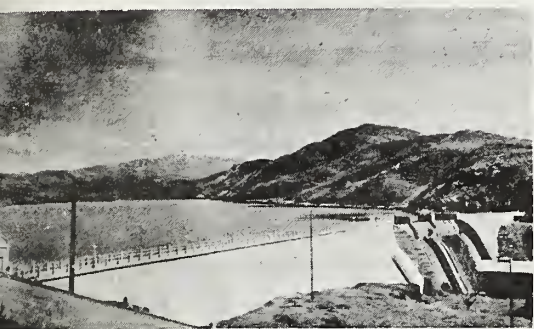
In Cooperation with

A. KENNETH DUNN
DIRECTOR
IDAHO DEPARTMENT OF WATER RESOURCES

////////////////////////////////////
Report prepared by

GERALD A. BEARD, Snow Survey Supervisor
PETER L. PALMER, Hydrologist
PAUL K. BROWN, JR., Electronics Technician
KATHERN G. WOOTTON, Statistical Assistant
SOIL CONSERVATION SERVICE
SNOW SURVEY SECTION
ROOM 345, 304 N. 8th. ST.
BOISE, IDAHO 83702

WATER SUPPLY OUTLOOK for IDAHO



GENERAL STATEMENT FOR MAY 1, 1983

The May 1 snow surveys show little change in the snowpack condition from the first of April except in the Bear River drainage in the extreme southeastern part of the State where significant increases were reported. Snowpack conditions range from a low of 73 percent of average on the Clearwater River drainage in northern Idaho to a high of 174 percent of average on the Little Wood River drainage in south central Idaho. One exception is the Owyhee River drainage which shows 323 percent of normal.

Precipitation across Idaho for April averaged 95 percent of normal with the least amount being across the mid-portion of the State with the north and south being heavier. Grangeville had only 37 percent while Boise had 201 percent. The water year is at 128 percent of normal with a range of from 80 percent at Grangeville to 180 percent at Ketchum.

The temperature range for April was from near normal in the North to five degrees below normal at Twin Falls.

Water supplies are expected to be near normal to well above normal across southern Idaho and near to below normal in the northern part of the State. The Clearwater and Spokane river drainages in northern Idaho are forecast to be 79 percent and 80 percent respectively. Forecasts in the southern part of the State range from 85 percent of average for the Snake near Heise to 180 percent of average for Magic Reservoir inflow. The net inflow to Owyhee Reservoir in eastern Oregon is 220 percent of normal.

The combination of melting snow and near normal precipitation have kept soil moisture conditions near the saturation level in southern Idaho while soils in the northern part are beginning to dry out.

Most reservoir levels remain above normal for the first of May and many reservoirs are now beginning to fill with some smaller reservoirs already nearing capacity. Most all reservoirs are expected to fill by mid-June.

The potential for high volume flows and possible flooding continues to exist on several major streams and their tributaries in southern Idaho. Peak flows are estimated to be at or above flood stage on the Big Wood, Little Wood, Payette, Bruneau, Portneuf, Henrys Fork and Salmon River at Salmon.

VALLEY PRECIPITATION 1/
Division Averages and Departures
In Inches

	Winter April 1983		Fall - Winter Nov. 82 - April 1983	
	Observed	Departure <u>2/</u>	Observed	Departure <u>2/</u>
Kootenai, Canada & U.S.	2.17	+ .55	16.13	+ .12
Flathead	1.30	- .34	10.68	- 1.69
Clark Fork	.56	- .77	7.37	- 1.96
Pend Oreille-Spokane	1.50	- .32	20.68	+ 1.31
Upper Snake	1.70	- .09	12.16	+ .26
Snake River Plain	.95	- .04	7.06	+ .99
Salmon-Payette-Boise	1.71	+ .28	16.95	+ 3.73
Clearwater	1.42	- 1.70	16.22	- 4.78
Owyhee-Malheur	1.57	+ .82	9.77	+ 3.35

1/Preliminary analysis and data by the National Weather Service and Meteorological Service of Canada.

2/Departure from 15-year (1963-1977) drainage division average.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average [†]

UPPER COLUMBIA BASIN

KOOTENAI RIVER

Leonia	(at)	7620	94	May-Sep	--	8116
		6520	93	May-Jul	--	6966

PEND OREILLE RIVER

Clark Fork River

Whitehorse Rapids	(at)	8960	73	May-Sep	--	12207
		7990	73	May-Jul	--	10945

Priest River

Priest River <u>1/</u>	(nr)	714	99	May-Sep	--	723
------------------------	------	-----	----	---------	----	-----

SPOKANE RIVER

Post Falls <u>2/</u>	(at)	1640	80	May-Sep	--	2052
		1560	80	May-Jul	--	1944

St. Joe River

Calder	(at)	878	83	May-Sep	--	1053
		822	84	May-Jul	--	984

SNAKE RIVER BASIN

SNAKE RIVER - MAIN STEM

Moran <u>3/</u>	(at)	849	94	Apr-Sep	--	903
Palisades Inflow <u>3/</u>		3477	90	Apr-Sep	--	3863
Heise <u>4/</u>	(nr)	3240	85	May-Sep	--	3824
		2725	85	May-Jul	--	3206
Blackfoot <u>5/</u>	(nr)	4710	91	May-Sep	--	5176
		3780	91	May-Jul	--	4143

Henrys Fork

Ashton <u>6/</u>	(nr)	720	114	May-Sep	--	634
		510	115	May-Jul	--	445
Rexburg <u>7/</u>	(nr)	1580	114	May-Sep	--	1387
		1205	114	May-Jul	--	1055

Teton

South Leigh Creek	(ab)	193	108	May-Sep	--	179
		138	108	May-Jul	--	128

Portneuf River

Topaz	(at)	68	96	May-Sep	--	71
-------	------	----	----	---------	----	----

Oakley Reservoir Inflow

		29	121	May-Sep	--	24
		25.5	121	May-Jul	--	21

Salmon Falls Creek

San Jacinto	(nr)	77	122	May-Sep	--	63
		71	122	May-Jul	--	58

Bruneau River

Hot Springs	(nr)	235	128	May-Sep	--	183
		219	128	May-Jul	--	171

Little Lost River

Howe	(nr)	47	120	May-Sep	--	39
		35	121	May-Jul	--	29
Wet Creek	(bl)	44.5	120	May-Sep	--	37
		36	120	May-Jul	--	30

Big Lost River

Howell Ranch	(at)	305	143	May-Sep	--	214
		274	145	May-Jul	--	189
		209	145	May-Jun	--	144
Mackay <u>8/</u>	(nr)	273	143	May-Sep	--	191

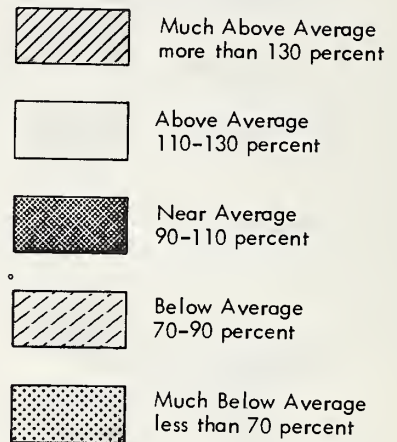
(c) Assuming normal meteorological conditions.

+1963-1977 period.

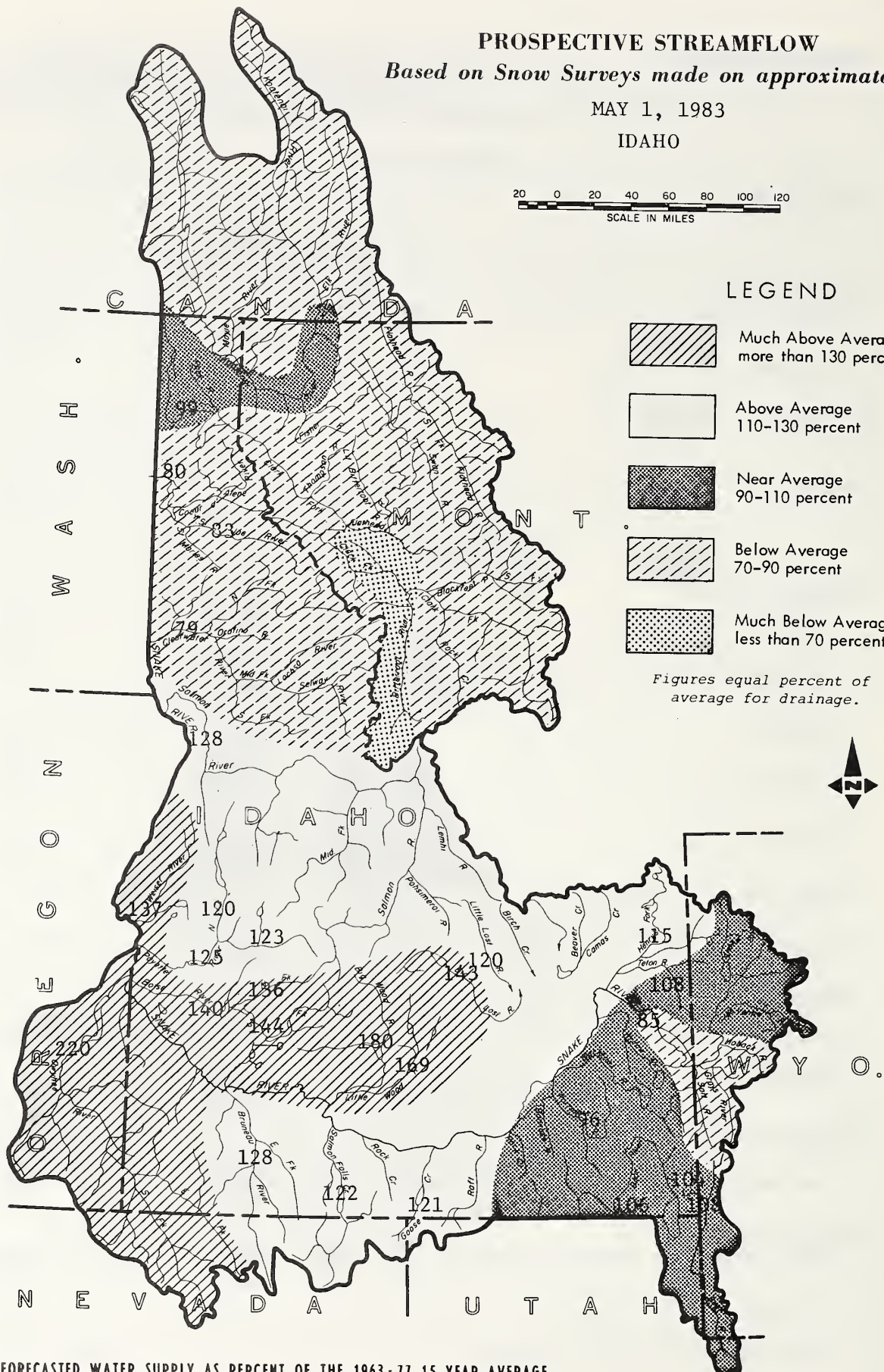
PROSPECTIVE STREAMFLOW
Based on Snow Surveys made on approximately
 MAY 1, 1983
 IDAHO

20 0 20 40 60 80 100 120
 SCALE IN MILES

LEGEND



*Figures equal percent of
average for drainage.*



FORECASTED WATER SUPPLY AS PERCENT OF THE 1963-77 15 YEAR AVERAGE

STREAMFLOW FORECASTS

STREAMFLOW FORECASTS		THIS YEAR			PAST RECORD	
		FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
		Thousand Acre Feet	Percent of Average		Last Year	Average [†]
BASIN, STREAM and/or FORECAST POINT						
<u>Big Wood River</u>						
Magic Reservoir		412	180	May-Sep	--	229
Inflow <u>9/</u>		383	180	May-Jul	--	213
<u>Little Wood River</u>						
Carey <u>10/</u>	(nr)	135	169	May-Sep	--	80
		120	167	May-Jul	--	72
<u>Boise River</u>						
Twin Springs	(nr)	840	136	May-Sep	--	616
		770	138	May-Jul	--	559
Boise <u>11/</u>	(nr)	1860	140	May-Sep	--	1326
		1700	141	May-Jul	--	1206
<u>South Fork</u>						
Anderson Dam <u>12/</u>	(at)	736	144	May-Sep	--	511
		680	144	May-Jul	--	472
<u>Owyhee River</u>						
Gold Cr., Nv <u>13/</u>	(nr)	45	200	Apr-Jul	--	22
Owyhee, Nv <u>13/</u>	(nr)	155	194	Apr-Jul	--	80
Lake Owyhee		493	220	May-Sep	--	224
net inflow <u>14/</u>		452	229	May-Jul	--	197
<u>Payette River</u>						
Horseshoe Bend <u>15/</u>	(nr)	1955	125	May-Sep	--	1567
		1785	125	May-Jul	--	1428
<u>North Fork</u>						
Cascade <u>16/</u>	(at)	575	120	May-Sep	--	480
		535	120	May-Jul	--	445
Banks <u>16/</u>	(nr)	724	121	May-Sep	--	599
<u>South Fork</u>						
Lowman	(nr)	570	123	May-Sep	--	465
		500	123	May-Jul	--	406
<u>Weiser River</u>						
Weiser	(nr)	379	137	May-Jul	--	276
<u>Salmon River</u>						
Whitebird	(at)	8420	128	May-Sep	--	6581
		7520	128	May-Jul	--	5889
<u>Clearwater River</u>						
Spalding	(at)	5620	79	May-Sep	--	7125
		5120	78	May-Jul	--	6645
<u>GREAT BASIN</u>						
<u>BEAR RIVER</u>						
Harer	(at)	293	108	May-Sep	--	271
<u>Montpelier Creek</u>						
Montpelier	(nr)	12.5	104	May-Sep	--	12
<u>Cub River</u>						
Preston	(nr)	52	106	May-Sep	--	49
		47	107	May-Jul	--	44

1/Observed flow corrected for storage in Priest Lake.

2/Observed flow corrected for storage in Coeur d'Alene Lake.

3/Corrected for storage in Jackson Lake.

4/Corrected for storage in Jackson Lake and Palisades.

5/Corrected for storage in Jackson Lake, Palisades, Island Park, Henrys Lake, Grassy Lake and diversions between Heise and Blackfoot.

6/Corrected for storage in Henrys Lake and Island Park Reservoir.

7/Corrected for storage in Henrys Lake and Island Park, Grassy Lake & diversions between Ashton & Rexburg.

8/Observed flow corrected for storage in Mackay Reservoir.

9/Combined flow Big Wood River nr. Bellevue and Camas Creek nr. Blaine

10/Corrected for storage in Little Wood Reservoir.

11/Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak.

12/Corrected for storage in Anderson Ranch Reservoir.

13/Corrected for storage in Wildhorse Reservoir

14/From Bureau of Reclamation records of inflow.

15/Corrected for storage in Cascade and Deadwood Reservoirs.

16/Corrected for storage in Cascade Reservoir.

Cooperative forecasts released by Soil Conservation Service and National Weather Service.

(c) Assuming normal meteorological conditions.

[†]1963-1977 period.

RESERVOIR STORAGE (1,000 Ac. Ft.)

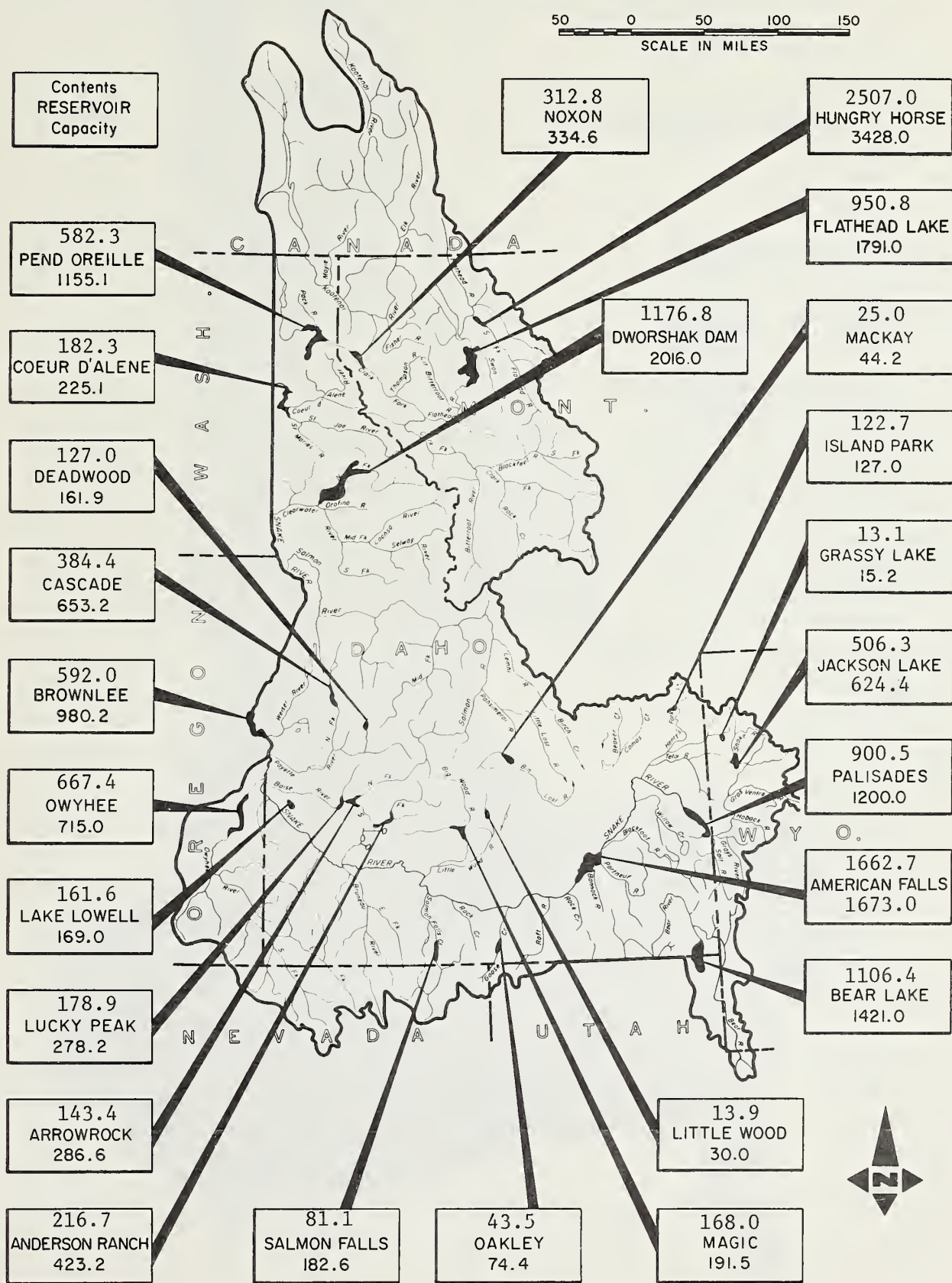
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1963-77 AVERAGE
UPPER COLUMBIA BASIN				
Clark Fork - Pend Oreille				
Hungry Horse	3428.0	2507.0	1884.0	1896.0
Flathead	1791.0	950.8	943.6	915.3
Pend Oreille	1155.1	582.3	516.6	483.0
Noxon	334.6	312.8	321.9	141.7
Spokane				
Coeur d'Alene	225.1	182.3	247.5	238.4
SNAKE BASIN				
Snake				
Jackson Lake	624.4	506.3	319.0	572.3
Palisades	1200.0	900.5	129.5	666.3
American Falls	1673.0	1662.7	1619.5	1488.4
Island Park	127.0	122.7	118.6	126.3
Grassy Lake	15.2	13.1	12.7	11.1
Brownlee	980.2	592.0	408.2	406.4
Goose-Trapper Creeks				
Oakley	74.4	43.5	28.8	37.8
Salmon Falls Creek				
Salmon Falls	182.6	81.1	55.4	81.0
Big Lost				
Mackay	44.2	25.0	34.3	34.0
Big Wood				
Magic	191.5	168.0	178.8	172.7
Little Wood				
Little Wood	30.0	13.9	15.0	24.5
Fish Creek				
Carey Valley	14.4	13.9	14.4	--
Boise				
Anderson Ranch	423.2	216.7	239.4	289.3
Arrowrock	286.6	143.4	129.1	213.2
Lucky Peak	278.2	178.9	50.6	134.1
Lake Lowell (Deer Flat)	169.0	161.6	161.8	151.2
Owyhee				
Owyhee	715.0	667.4	692.3	591.2
Payette				
Cascade	653.2	384.4	319.9	330.9
Deadwood	161.9	127.0	112.3	98.2
Weiser				
Mann Creek	11.1	9.4	11.2	--
Clearwater				
Dworshak	2016.0	1176.8	283.5	--
GREAT BASIN				
Bear				
Bear Lake	1421.0	1106.4	1003.7	1095.0
*Period of Record				

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

MAY 1983

50 0 50 100 150
SCALE IN MILES



COMPARISON of SNOW COVER

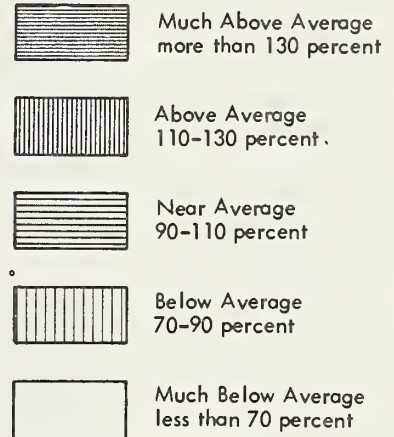
RIVER BASIN WATERSHED	NO. OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF	
		LAST YEAR	1963-77 AVERAGE
UPPER COLUMBIA RIVER BASIN			
Kootenai River	49	71	86
Pend Oreille River	132	65	78
Clark Fork River	90	59	74
Flathead River	42	75	84
Priest River	5 - 6	95	117
Spokane River	8 - 9	75	76
Hayden Creek	-	-	-
LOWER SNAKE RIVER BASIN			
Palouse River	-	-	-
Clearwater River	19 - 20	66	73
Salmon River	15 - 18	86	116
Lemhi River	-	-	-
MIDDLE SNAKE RIVER BASIN - Northside			
Little Lost River	4 - 6	98	131
Big Lost River	4	101	148
Fish Creek	-	-	-
Little Wood River	4	121	174
Big Wood River	10 - 11	96	145
Boise River	11 - 13	100	143
Canyon Creek	-	-	-
Payette River	12 - 15	92	127
Weiser River	1 - 3	98	121
Mann Creek	-	-	-
MIDDLE SNAKE RIVER BASIN - Southside			
Raft River	1	104	158
Goose-Trapper Creek	-	-	-
Salmon Falls Creek	4 - 5	117	123
Bruneau River	1	99	112
Owyhee River	1	143	323
Jordan Creek	-	-	-
UPPER SNAKE RIVER BASIN			
Snake Basin - Above Palisades Reservoir	15	73	100
Camas-Beaver Creeks	-	-	-
Henrys Fork River	6 - 7	84	113
Teton River	7 - 9	81	111
Willow Creek	3	113	-
Blackfoot River	1 - 2	76	92
Portneuf River	-	-	-
GREAT BASIN			
Bear River - Upper	4	82	106
Bear River - Lower	14	72	110
Montpelier Creek	6	77	130
Mink Creek	1	85	121
Cub River	3	72	122
Malad River	-	-	-

SNOW WATER DEPTHS
 As percent of 1963-77 15 year average
 MAY 1, 1983

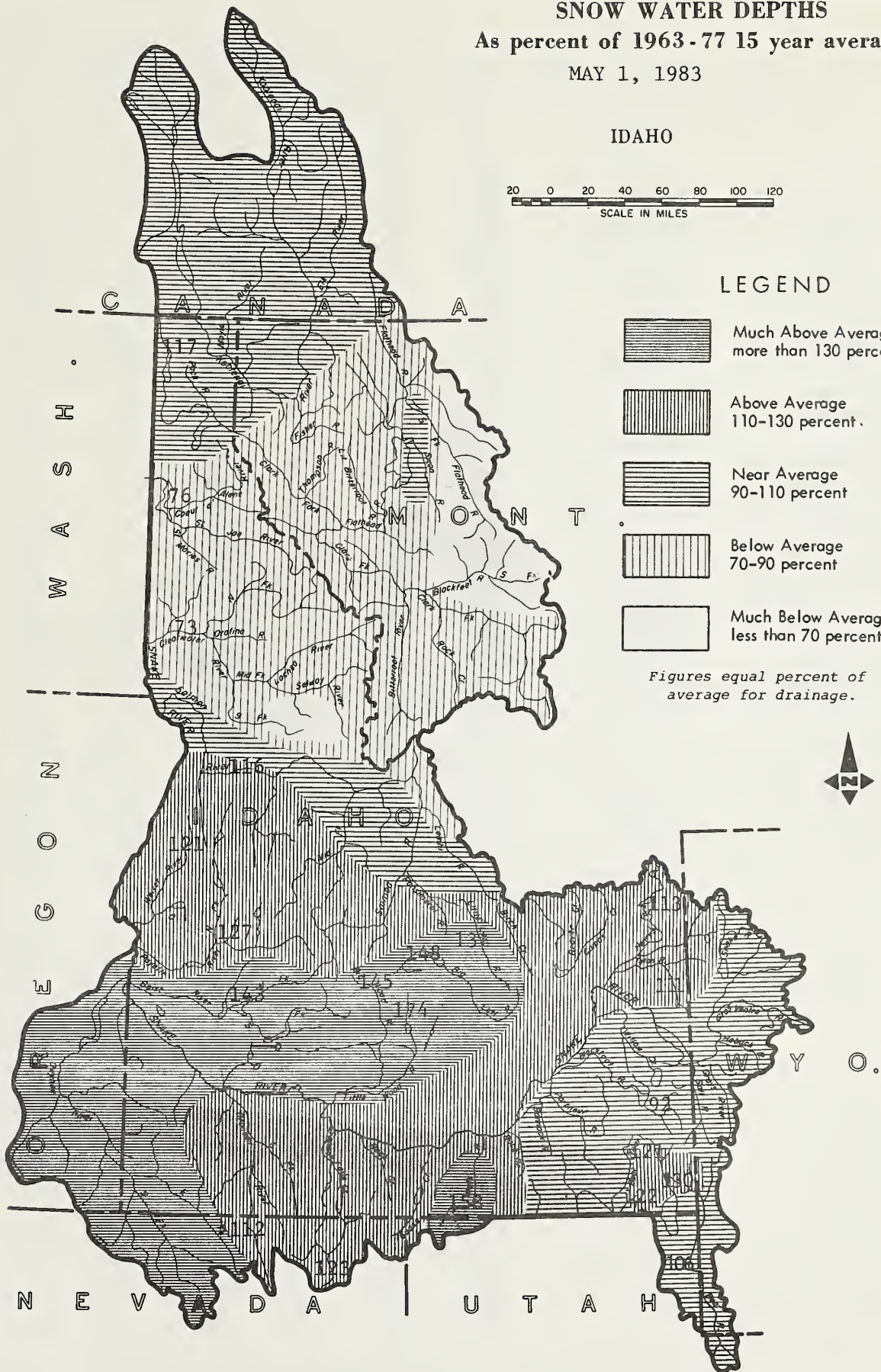
IDAHO

20 0 20 40 60 80 100 120
 SCALE IN MILES

LEGEND



*Figures equal percent of
 average for drainage.*



SNOW

DRAINAGE BASIN and or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
						Last Year	Average
NAME & DRAINAGE		Elevation					
Above Burke	Coeur d'Alene	4100	4/28	29	13.4	20.6	19.7*
Atlanta Summit	Boise	7600	4/26	114	49.0	--	36.6
Atlanta Townsite	Boise	5370	4/26	18	7.2	7.5	--
Bad Bear	Boise	4940	4/29	14	6.0	8.8	6.8
Banner Summit	Payette	7040	4/26	84	35.3	43.6	--
Beagle Springs	(Mt) Beaverhead	8850	4/29	36	11.5	--	--
Bear Basin	Little Salmon	5350	4/28	55	22.8	21.2	--
Bear Canyon	Big Lost	7900	4/27	69	27.0	28.1	18.9*
Bear Mountain	Clark Fork	5400	4/27	141	69.4	83.9	67.7*
Benton Meadow	Priest	2370	4/29	0	0.0	0.0	0.0*
Benton Spring	Priest	4920	4/29	39	19.5	17.7	16.7
Big Creek Summit	Salmon	6580	4/29	107	46.7	55.3	37.8
Big Springs	Henrys Fork	6400	4/29	38	16.8	20.6	17.7
Birch Creek	Willow	6800	4/28	16	6.2	0.0	--
Black Bear	(Mt) Madison	7950	4/28	104	48.5	59.6	--
Blue Ridge	Blackfoot	6780	4/28	53	24.3	24.5	--
Bogus Basin	Payette	6340	4/29	86	39.8	27.5	24.0*
Bogus Basin Road	Boise	5540	4/29	0	0.0	0.0	0.4*
Bone	Willow	6200	4/28	0	0.0	--	--
Boulder Creek	Weiser	5440	4/27	46	20.4	22.4	16.8
Breezy Saddle	Clearwater	5010	4/28	59	21.8	30.2	--
Brockman Station	Willow	6430	4/28	17	7.1	--	--
Brundage Mountain	Little Salmon	7560	4/29	133	62.0	65.4	52.4*
Bruno Creek	Squaw Creek	7920	4/29	51	20.4	--	--
Buck Meadows	Selway	5650	4/28	53	18.6	34.7	29.9*
Cayuse Airstrip	Clearwater	3500	4/28	0	0.0	0.8	1.0*
Coolwater Mountain	Lochsa	6030	4/28	89	32.7	49.3	35.5*
Copper Basin	Big Lost	7640	4/27	40	14.9	13.5	8.5*
Copper Ridge	Coeur d'Alene	4820	4/25	43	20.5	16.7	25.7
Couch Summit	Boise	6840	4/30	58	26.7	18.0	14.9*
Cozy Cove	Deadwood	5380	4/26	32	12.7	13.8	10.7*
Crater Meadows	Clearwater	5960	4/28	91	35.6	49.4	47.8
Crawford Ranger Sta.	Payette	4860	4/29	0	0.0	0.0	0.4
Crooked Fork	Lochsa	3610	4/29	0	0.0	7.8	3.5*
Cub River Ranger Sta.	Cub	5450	4/28	0	0.0	0.6	0.0
Darby Canyon	(Wy) Teton	8250	4/28	69	28.3	--	25.5*
Deadline	Salmon Falls	7400	5/3	63	29.9	21.9	21.7*
Deadline South	Salmon Falls	7450	5/3	79	37.4	24.1	--
Deadwood Airstrip	Deadwood	5360	4/26	34	13.3	14.2	8.6*
Deadwood Summit	Deadwood	6860	4/26	127	58.7	68.9	48.2*
Dollarhide Summit	Big Wood	8420	4/27	95	38.2	39.4	24.3*
Elk Butte	Clearwater	5550	4/28	62	23.8	32.4	34.1
Emigrant Summit	Bear	7390	4/28	74	30.1	35.3	24.9*
Fairview Guard Sta.	Little Lost	6750	4/28	0	0.0	0.0	--
Fish Lake Airstrip	Lochsa	5650	4/28	77	29.0	45.2	41.4*
Fishpole Lake	Big Lost	9300	4/27	99	40.7	--	--
Forty-nine Meadows	Clearwater	4830	4/28	54	20.6	28.0	26.9
Freds Mountain	(Wy) Teton	8150	4/29	77	29.7	34.9	21.1*
Galena	Big Wood	7440	5/2	54	23.1	27.6	15.9
Galena Snotel	Big Wood	7470	5/2	67	28.3	29.2	--
Galena Summit	Big Wood	8780	5/2	88	35.2	36.2	26.9
Garfield Ranger Sta.	Little Wood	6560	4/27	27	10.9	6.4	2.6*
Gibbons Pass	(Mt) Bitterroot	7100	4/28	57	25.0	31.6	25.3
Giveout	Montpelier	6860	4/28	30	11.1	16.4	6.9*
Giveout Snotel	Montpelier	6930	4/28	21	7.5	--	--
Goat Creek	(Nv) Salmon Falls	8880	5/3	68	26.8	26.5	20.8
Goat Lake	Clearwater	6500	4/28	100	39.6	54.4	51.9*
Graham Guard Station	Boise	5690	4/26	33	14.1	16.3	--
Graham Ranch	Big Wood	6270	5/2	40	17.5	18.4	9.2*
Granite Peak	St. Joe	6000	4/28	99	37.0	50.0	47.6*
Grassy Lake	(Wy) Henrys Fork	7265	4/29	85	37.8	48.2	36.4
Hemlock Butte	Clearwater	5810	4/28	96	37.8	55.6	52.4
Hilts Creek	Little Lost	8000	4/29	51	18.4	21.0	--
Heart Lake Trail	(Mt) Clark Fork	4800	4/30	20	9.0	24.2	23.8
Hoodoo Basin	(Mt) Clark Fork	6000	4/30	96	45.7	68.5	55.6*
Hoodoo Creek	(Mt) Clark Fork	5900	4/30	90	41.4	61.8	52.0
Howell Canyon	Marsh Creek	7980	5/2	80	37.4	36.1	23.7*
Humboldt Gulch	Coeur d'Alene	4250	4/28	21	11.0	14.4	--
Hyndman Creek	Big Wood	7440	4/27	48	19.0	18.3	--
Idaho City Townsite	Boise	4000	4/29	0	0.0	0.0	--
Indian Meadows	Teton	8240	4/28	110	48.2	53.1	39.9*
Island Park	Henrys Fork	6290	4/29	32	14.4	15.7	11.4

(b) 1963-1977, 15 year period. * Estimated 1963-77 15 Year Average.

(A) Aerial observation Water content estimated.

SNOW

DRAINAGE BASIN and or SNOW COURSE				THIS YEAR			PAST RECORD	
				Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME & DRAINAGE			Elevation				Last Year	Average
Jackpine Creek	(Wy)	Teton	7350	4/28	62	25.0	26.1	24.1*
Jackson Peak		Boise	7070	4/26	94	39.4	42.1	26.8*
Lake Fork		Payette	5290	4/30	32	12.9	18.0	14.1*
Lava Creek		Willow	7350	4/28	42	17.6	--	--
Lemhi Pass	(Mt)	Beaverhead	7480	4/29	15	5.0	11.3	9.2
Lemhi Ridge	(Mt)	Beaverhead	8100	4/29	26	8.6	13.9	10.6*
Little Beaver		Montpelier	6970	4/28	38	14.0	18.6	11.4*
Lolo Pass		Lochsa	5240	4/29	34	15.8	33.4	31.4
Lookout		Coeur d'Alene	5140	4/28	69	30.6	40.4	35.4
Lost Garfield		Little Lost	6600	4/28	0	0.0	0.0	0.0*
Lost Horse	(Mt)	Bitterroot	5940	4/27	62	26.8	45.2	35.2
Lost Lake		Clearwater	6110	4/28	123	49.4	63.6	62.5
Lost-Wood Divide		Big Lost	7900	4/27	74	30.0	32.8	24.8*
Lower Home Canyon		Montpelier	7640	4/28	36	12.6	16.8	11.1*
Lower Sands Creek		Coeur d'Alene	3120	4/25	31	13.1	15.9	18.3
Magic Mountain		Rock Creek	6880	5/3	54	22.1	22.3	18.8*
Mascot Mine		Big Wood	7780	4/27	57	22.4	22.9	15.5*
McRenolds Reservoir		Teton	6720	4/28	51	19.0	--	19.8*
Mill Creek Summit		Salmon	8800	4/29	71	28.6	35.9	25.9*
Montpelier Creek		Montpelier	6540	4/28	10	4.2	3.4	1.2*
Moonshine		Little Lost	7440	4/28	31	11.0	10.3	9.6*
Moore's Creek Summit		Boise	6100	4/29	93	44.0	43.5	32.6
Moose Creek		North Fork Salmon	6200	4/29	37	14.6	21.2	16.6*
Morgan Creek		Salmon	7600	4/28	37	14.4	19.7	13.9
Mountain Meadows		Selway	6360	4/28	41	13.1	27.0	26.3*
Mount Baldy		Big Wood	8920	4/26	96	36.2	38.4	23.6*
Mud Creek		Willow	7100	4/28	69	29.1	28.4	--
Muldoon		Little Wood	6320	4/27	9	3.3	0.0	0.6*
Nez Perce Pass	(Mt)	Bitterroot	6570	4/25	29	12.0	24.1	19.0
Packsaddle Spring		Teton	8200	4/28	83	34.0	--	--
Phillips Bench	(Wy)	Teton	8200	4/28	77	30.0	46.0	31.5*
Pierce Ranger Sta.		Clearwater	3080	4/29	0	0.0	0.0	1.9
Pine Creek Pass		Teton	6810	4/29	35	15.1	22.0	14.8
Pole Creek Ranger Sta.		Jarbridge	8360	5/3	68	28.4	29.1	25.8*
Road Creek		Boise	5380	4/27	0	0.0	--	--
Rock Flat Summit		Payette	5310	4/28	52	23.0	21.5	17.9
Sage Creek Saddle		Hayden	4080	4/26	22	9.1	--	--
Savage Pass		Lochsa	6170	4/29	54	21.7	40.3	29.3*
Sawmill Canyon		Little Lost	7000	4/29	14	5.4	6.3	3.8*
Sawtell Mountain		Henrys Fork	8720	4/29	116	51.7	56.4	37.1*
Schweitzer Basin		Pend Oreille	6090	4/28	131	69.5	66.4	--
Schweitzer Bowl		Pend Oreille	4800	4/28	79	36.3	40.1	26.8*
Schweitzer Ridge		Pend Oreille	6200	4/28	126	58.7	61.3	47.5*
Secesh Summit		Payette	6520	4/30	91	42.4	55.7	36.9*
Shanghai Summit		Clearwater	4570	4/28	38	13.2	25.2	23.1
Sheep Mountain		Willow	6570	4/28	33	12.8	--	--
Sherwin		St. Maries	3200	4/29	0	0.0	10.0	7.2*
Skitwish Ridge		Coeur d'Alene	5110	4/25	68	32.1	--	--
Slug Creek Divide		Blackfoot	7230	4/27	43	15.6	21.2	17.0*
Smith Creek		Kootenai	4800	4/28	106	51.0	58.0	47.4
Soldier Ranger Sta.		Big Wood	5740	4/30	14	6.9	5.7	1.1*
Somsen Ranch		Willow Creek	6840	4/27	36	14.5	18.3	--
South Mountain		Jordan-Owyhee	6500	5/1	52	22.9	16.0	7.1*
Squaw Flat		Weiser	6240	4/30	73	32.8	30.4	--
Squaw Meadow		Payette	5900	4/30	89	47.4	53.7	36.1*
State Line		Teton	6660	4/29	32	13.2	14.9	10.7
Stickney Mill		Big Lost	7430	4/27	40	14.8	11.8	6.5*
Swede Peak		Little Wood	7640	4/27	64	26.5	21.3	16.7*
Targhee Pass		Henrys Fork	6980	4/29	36	14.2	17.3	16.2*
Teton Pass W.S.	(Wy)	Teton	7740	4/28	73	30.2	38.2	28.9*
Trinity Mountain		Boise	7770	4/26	129	61.7	63.3	44.1*
Twelve Mile Creek	(Mt)	Bitterroot	5600	4/27	21	8.2	--	--
Twin Lakes	(Mt)	Bitterroot	6510	4/27	79	35.0	--	--
Upper Home Canyon		Montpelier	8560	4/28	71	27.6	35.3	24.5*
Valley View		Henrys Fork	6680	4/29	39	16.3	21.1	14.5
Vienna Mine		Salmon	8960	4/27	108	47.6	58.6	39.9*
West Branch		Weiser	5560	4/27	53	24.0	25.9	--
Wet Creek Summit		Little Lost	7680	4/29	52	19.1	17.4	13.8*
Whiskey Flat		Montpelier	6960	4/28	20	7.8	9.6	4.5*
White Elephant		Henrys Fork	7710	4/29	74	32.0	38.0	--
Willow Flat		Cub	6070	4/26	26	9.6	13.7	5.5*

(b) 1963-1977, 15 year period. * Estimated 1963-77 15 Year Average.

(A) Aerial observation Water content estimated.

SNOTEL^{1/}

Data Site Name	Drainage	Date	Pillow Snow Water Equivalent (inches)	Precipitation Water Year (Accumulative) (inches)
Atlanta Summit	Boise	5/1	Not Available	49.7
Banner Summit	Payette	5/1	34.2	40.5
Bear Basin	Little Salmon	5/1	10.3	Not Available
Bear Canyon	Big Lost	5/1	27.2	33.7
Bear Mountain	Clark Fork	5/1	47.7	78.2
Bear Saddle	Mann Creek	5/1	9.7	42.4
Bennett Mountain	Canyon Creek	5/1	27.6	33.4
Big Creek Summit	Salmon	5/1	45.0	50.3
Bostetter Ranger Station	Trapper	5/1	37.2	18.7
Cozy Cove	Deadwood	5/1	14.8	34.6
Crab Creek	Camas-Beaver	5/1	26.0	29.7
Deadwood Summit	Deadwood	5/1	69.6	63.1
Dollarhide Summit	Big Wood	5/1	40.2	42.1
Elk Butte	Clearwater	5/1	37.1	48.4
Emigrant Summit	Bear	5/1	36.3	34.5
Franklin Basin	Cub	5/1	37.7	36.3
Galena	Big Wood	5/1	26.5	27.7
Galena Summit	Big Wood	5/1	30.0	33.3
Garfield Ranger Station	Little Wood	5/1	13.7	23.5
Giveout	Montpelier	5/1	8.9	13.7
Graham Guard Station	Boise	5/1	14.2	32.8
Hilts Creek	Little Lost	5/1	22.4	22.1
Howell Canyon	Marsh Creek	5/1	32.8	36.8
Humboldt Gulch	Coeur d'Alene	5/1	5.3	40.8
Hyndman	Big Wood	5/1	19.4	25.7
Island Park	Henrys Fork	5/1	15.3	26.0
Jackson Peak	Boise	5/1	43.2	46.9
Lolo Pass	Lochsa	5/1	6.2	33.8
Lookout	Coeur d'Alene	5/1	28.5	42.9
Lost Lake	Clearwater	5/1	60.8	62.0
Lost-Wood Divide	Big Lost	5/1	35.5	36.3
Magic Mountain	Rock Creek	5/1	24.0	29.4
Meadow Lake	Lemhi	5/1	25.8	23.3
Mill Creek Summit	Salmon	5/1	24.8	26.3
Moonshine	Little Lost	5/1	14.1	18.9
Moores Creek Summit	Boise	5/1	47.4	50.1
Moose Creek	North Fork Salmon	5/1	15.8	23.2
Morgan Creek	Salmon	5/1	14.8	19.2
Mosquito Ridge	Coeur d'Alene	5/1	39.3	50.9
Mountain Meadows	Selway	5/1	20.1	27.0
Mud Flat	Owyhee	5/1	Not Available	Not Available
Oxford Spring	Malad	5/1	10.2	24.2
Prairie	Boise	5/1	0.0	26.1
Savage Pass	Lochsa	5/1	21.3	29.2
Schweitzer Basin	Pend Oreille	5/1	70.2	52.3
Secesh Summit	Payette	5/1	46.9	Not Available
Shanghai Summit	Clearwater	5/1	15.9	40.4
Sheep Mountain	Willow	5/1	Not Available	21.8
Sherwin	St. Maries	5/1	0.0	33.4
Slug Creek Divide	Blackfoot	5/1	20.1	24.8
Somsen Ranch	Willow Creek	5/1	12.1	19.8
South Mountain	Jordan-Owyhee	5/1	30.7	37.0
Squaw Flat	Weiser	5/1	41.6	45.0
Stickney Mill	Big Lost	5/1	13.2	17.1
Sunset	Coeur d'Alene	5/1	34.0	Not Available
Swede Peak	Little Wood	5/1	24.1	33.8
Trinity Mountain	Boise	5/1	59.6	60.6
Vienna Mine	Salmon	5/1	49.5	47.1
West Branch	Weiser	5/1	25.9	44.3
White Elephant	Henrys Fork	5/1	38.0	41.7
Wildhorse Divide	Portneuf	5/1	6.6	30.1

^{1/}Data readings as reported by automated Snotel System.

GOVERNMENT AGENCIES

States:

Idaho Department of Water Resources
State of Idaho Department of Fish and Game
University of Idaho
Idaho State University
Montana Agricultural Experiment Station
Montana State Water Conservation Board
Montana Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon Cooperative Snow Surveys
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U. S. Army Engineers

U. S. Department of Agriculture
Forest Service
ESCS Crop Reporting Service
SEA Agricultural Research

U. S. Department of Commerce
NOAA, National Weather Service

U. S. Department of the Interior
Bonneville Power Administration
Water and Power Resources Service
Fish and Wildlife Service
Water Resources Division, Geological Survey
National Park Service
Bureau of Land Management

PUBLIC UTILITIES

Washington Water Power Company
Idaho Power Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Blaine Soil Conservation District
Boise Project Board of Control
Idaho Water District #01
Little Wood River Irrigation District
Mann Creek Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control
Valley Soil Conservation District
Portneuf Soil and Water Conservation District
East Cassia Soil and Water Conservation District
West Cassia Soil and Water Conservation District
Camas Soil and Water Conservation District

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Room 345
304 N. 8TH ST.
BOISE, IDAHO 83702

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF
AGRICULTURE
AGR-101



FIRST CLASS MAIL

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*

Dr. Albert Rango, Chief
Hydrology Laboratory
Rm. 139, Building 007
USDA/ARS/BARC-West
Beltsville, Maryland 20705